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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,473	02/28/2002	Andreas F. Kotowski	RAPI-011	2361

7590 10/03/2005  
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EXAMINER

NGUYEN, MINH T

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

### Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/25/05 has been entered.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

In paragraph 16.1, line 9, "a CV (coefficient of variation in the range ...)" should be changed to -- a CV (coefficient of variation) in the range ... --.

In paragraph 16.4, figure 7 shown in the drawings of the present invention does not corresponding to the description on lines 6-8 of the paragraph.

Appropriate correction is required.

### ***Claim Objections***

3. Claim 42 is objected to because of the following informalities: line 1, "The device of Claim 14" should be changed to -- The apparatus of Claim 15 --, see claim 37. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,974,247, issued to Friddell in view of US Patent No. 5,181,234, issued to Smith.

As per claim 15, Friddell discloses an apparatus (figure 1) to detect concealed items on or in an object (see the abstract), comprising:

an x-ray source (12) and a scanner (18), the x-ray source to produce a pencil beam (column 5, lines 22-23) to an object (16);

a detector (detector 34) to detect x-rays scattered (column 5, last line, column 6, lines 1-19, i.e., the pencil beam of x-rays from the source 12 interacts with the object 16 and the low Z material 32 and are backscattered) as a result of interacting with the object (16) and a low Z material panel (the panel 32, column 6, line 42, i.e., the panel 32 is made of low atomic sheet material), the object 16 is located between the detector (34) and the panel (32), the detector differentiating x-rays back scattered from the object and the low Z material (this is merely the function of a detector, i.e., differentiating the object from the background).

In column 6, lines 48-54, Friddell explicitly discloses that the energy level of the pencil beam of x-rays generated by the source 12 can be increased or decreased depending on the

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different types of objects. The purpose of adjusting the energy level is for obtaining the optimum image contrast so that the concealed items can be detected.

Friddell does not explicitly disclose the pencil beam of x-rays exposes the object to an x-ray dose in the range of about 1 micoRem to about 10 micoRem as called for in the claim.

Smith discloses an inspection system for inspecting concealed items carried by human. He discloses that high radiation doses pose health risk to persons being exposed (column 9, lines 42-43), and therefore the intensity level of the x-ray beam must be taken into account when designing the system. Further, he explicitly discloses that x-ray dose in the range of about 1 micoRem to about 10 micoRem does not create health risk to human (column 9, line 39) and still satisfies the image quality requirements.

Further, in light of previous court cases involving range limitations recited in the claim, the court held that when the structure of the apparatus is the same, adjusting the range to obtain the optimum condition is not patentable since the practice can be done by an average person skilled in the art. In this instant case, the Friddell's apparatus has all the recited structure as discussed above, changing the energy level of the pencil beam of x-rays within a certain range (by adjusting the energy level generated by the source 12 as explicitly taught in column 6, lines 48-54 of Friddell) to obtain the optimum condition is not patentable since the practice can be clearly done by an average person skilled in the art.

It would have been obvious to one skilled in the art at the time of the invention was made to adjust the pencil beam of x-rays in the Friddell's system to a level which is in the range of about 1 micoRem to about 10 micoRem as taught by Smith when the inspected objects include human.

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The motivation and/or suggestion would be to minimize the health risk and to obtain the clearest image on the display which still satisfy the image quality requirements as explicitly taught by Smith.

As per claim 16, the recited limitation reads on the processor (38).

As per claim 17, the recited limitation reads on the display unit (42).

As per claim 18, Friddell discloses the apparatus as discussed in claim 15. He further explicitly teaches the low Z material is chosen based on the object being inspected (column 6, lines 37-45). However, he does not explicitly disclose the low Z material is made of polyethylene as called for in the claim.

However, as held by the court, when the structure of the apparatus (overall conditions) are met, changing the material (the low Z material) from one to another to obtain the optimum condition is not patentable since the practice can be done by an average person skilled in the art.

It would have been obvious to one skilled in the art at the time of the invention was made to modify the Friddell panel (32) using a certain material such as polyethylene for the motivation to obtain optimum images shown in the display when the Friddell's apparatus is used to detect a certain, known Z object.

As per claims 19-20, these claims are rejected for the same reasons and motivations as discussed in claim 18.

As per claim 21, Friddell does not explicitly disclose a radiation shield as called for in the claim. However, this limitation is seen as obvious by a person skilled in the art at the time of the invention was made since human being are known for being harmed when exposed to x-ray beams, i.e., the apparatus needs radiation shields for safety purpose.

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As per claims 22-25, materials such as steel, lead used as absorbing materials for radiation shield and the selection of the thickness of the materials are well-known in the art.

As per claim 26-27, adjusting the positions of the low Z material panels to obtain the optimum images is seen as an obvious adjusting for the same motivation discussed in claim 18.

As per claim 1, this claim is merely a method to operate the apparatus noted in claim 15, since the apparatus discussed in claim 15 is disclosed, the method to operate such an apparatus is seen as obvious.

As per claims 2-3, rejected for the same reasons noted in claims 16-17, respectively.

As per claims 4-13, same rejections as claims 18-27.

As per claim 14, same rejection as claim 1.

As per claim 38, the recited limitation is taught in column 5, line 41 of Smith.

As per claim 39, the recited limitation is taught in column 6, line 21 of Smith.

As per claim 40, the recited limitation is taught in column 9, line 56 of Smith.

As per claim 41, this claim is rejected for the same reason noted in claim 40.

As per claim 42, the recited limitation is taught in column 6, lines 10-11 of Smith.

As per claims 28-37, these claims are rejected for the same reasons noted in one of claims 38-42.

### ***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 571-272-1748. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



9/29/05

Minh Nguyen  
Primary Examiner  
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